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and Preliminary Report of Progress  
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FARMER COOPERATIVE SERVICE  
of the  
UNITED STATES DEPARTMENT OF AGRICULTURE  
and related work of the  
STATE AGRICULTURAL EXPERIMENT STATIONS

This progress report is primarily a tool for use of scientists and administrators in program coordination, development and evaluation; and for use of advisory committees in program review and development of recommendations for future research programs.

The summaries of progress on USDA and cooperative research include some tentative results that have not been tested sufficiently to justify general release. Such findings, when adequately confirmed, will be released promptly through established channels. Because of this, the report is not intended for publication and should not be referred to in literature citations. Copies are distributed only to members of Department staff, advisory committee members and others having a special interest in the development of public agricultural research programs.

This report also includes a list of publications reporting results of USDA and cooperative research issued between October 1, 1963, and September 30, 1964. Current agricultural research findings are also published in the monthly USDA publication, News for Farmer Cooperatives. This progress report was compiled in the Farmer Cooperative Service, U.S. Department of Agriculture, Washington, D. C. 20250

UNITED STATES DEPARTMENT OF AGRICULTURE  
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## INTRODUCTION

The function of the Farmer Cooperative Service is to help farmers build effective cooperative business enterprises to serve their needs in marketing farm products, purchasing farm supplies, and obtaining other needed services. The Service conducts economic research and does educational and advisory work to assist the 3 million farmers who are members of the 9,040 marketing, purchasing, and related business service cooperatives.

The Service acquires, analyzes, publishes, and disseminates information about farmer cooperatives to further their sound development. Studies are made to improve cooperatives' organization structure, management, financing, and operating methods. Marketing research is conducted on methods, costs, and other aspects of processing, distribution, and selling of farm products by farmer cooperatives.

The Farmer Cooperative Service has a total staff of 90, including 49 professional economists and 1 marketing specialist. All the staff is located in Washington, D. C. In addition, the Service supervises marketing research contracts equivalent to 1 professional man-year per year.

The three program Divisions--Marketing, Purchasing, and Management Services--correspond to the three work areas in this report. Much of the work of the Service is conducted in close cooperation with land-grant colleges, State extension services, State departments of agriculture, and banks for cooperatives. Most of these arrangements are informal, but some of the research work with experiment stations is conducted under contract. At the present time, the Service has nine research contracts with land-grant colleges.

Cooperatives represent a major method for meeting the marketing and purchasing problems of family farms and for strengthening their bargaining position. Farmers can get higher returns on farm products they market and save money on supplies and services they purchase by increased use and constant improvement of their cooperatives, which are devoted specifically to these objectives.

However, farmers must help their cooperatives to change rapidly in order to meet the requirements imposed by fast changes in both farming methods and in the marketplace. Marketing cooperatives must in some commodities create entirely new systems extending from procurement to processing to sales methods, all with a renewed emphasis on the quality, quantity, and service demands of mass merchandising. Purchasing and farm service cooperatives must make comparable adjustments to changes in farming equipment and methods. Cooperative leaders have an increasing need for factual knowledge based on research to plan confidently the necessary changes in plants, transportation equipment, procurement and sales methods, bargaining programs, and other services.

Cooperatives need to improve their organization structure and develop management competent to deal with increasingly complex problems and operations. Membership participation must be further increased to maintain the distinctive cooperative features arising from member control. Cooperatives must capitalize on the potential benefits of transportation innovations. In general, however, cooperatives must meet demands for improved transportation services while costs continue to increase.

Some recent examples of progress are as follows:

Improving pooling and pricing methods of marketing cooperatives. Study of marketing methods of dairy cooperatives showed that pooling is conducted in one form or another by all these associations. Over 600,000 dairy farmers participate in these pools. The specific procedures vary greatly. Emphasis in this study is on designing and selecting milk pooling methods that will be effective and equitable to all producers in the new market environment. Preliminary results of a study of 18 egg marketing cooperatives indicated that the majority offered producers price differentials based on size of shipment, refrigeration on the farm, and egg quality. A study of lamb pooling showed that there are 235 agencies providing this service and that farmers received from 50 cents to \$5 per hundredweight more than if lambs had been sold individually in small ungraded and non-uniform lots.

Costs of ginning cotton at single-gin and two-gin cooperative plants compared. Findings of this study showed that costs at single-gin plants were from 13 cents to \$1.07 lower per bale than at two-gin plants when volume per gin was equal. This was caused mostly by two-gin units hiring more skilled labor on a year-round basis. Costs at gins operating at or near capacity were about \$10 a bale less than at those ginning relatively low volumes. Results of the study raised the question of whether costs could be lowered further by gins storing seed cotton in baskets and by other methods to reduce ginning costs.

Improving structure and operations of cooperative looseleaf tobacco auctions. Farmer Cooperative Service studied the organizational and operational features of the 15 cooperative looseleaf tobacco auctions in the United States. These associations serve 50,000 tobacco growers. Findings will be beneficial to these associations in comparing their operations and to growers who contemplate the formation of similar organizations. For example, recommendations were made that cooperatives provide further services for patrons and increase emphasis on delivering high quality tobacco for sale.

Adjusting supply operations to changing economic conditions. Farmer Cooperative Service analyzed operations of selected cooperatives on a case study basis to provide guidelines for needed adjustments. Findings from these studies emphasized that in many situations adjustments needed included not only internal improvements but also unification with other cooperatives.

Improving distribution practices of supply operations. There has been broad interest in the effect of bulk handling systems on cooperative operations and a limited shift to this method of handling. Farmer Cooperative Service has studied bulk fertilizer blending plants, and bulk feed depots. These studies analyze costs and other aspects to provide objective guidelines to assist cooperatives in evaluating these relatively new distribution methods. Bulk fertilizer blending plants offer a means for providing a fertilizer adapted to specific farm requirements without increasing costs. Preliminary analysis of bulk feed depots indicates that such depots offer a means of using existing large mills and provide farmers with bulk feed services at lower costs.

Measuring effects of the Revenue Act of 1962 on farmer cooperatives. The investment credit provisions of the Internal Revenue Code of 1962 can affect financial planning of cooperatives in decisions pertaining to modernizing or expanding facilities. Farmer Cooperative Service studied the applicability of these provisions and their impact on the operations of farmer cooperatives. A report of findings provides cooperative information illustrating differences in applicability and impact of these provisions on exempt and nonexempt cooperatives. This information will assist cooperatives in conforming to the patron-cooperative relationship as specified by the new Federal income tax laws and regulations.

Improving financial structure of farm supply cooperatives. Continuing changes in cooperative membership, market structure, and scope and nature of operations have created a need for analysis of financing methods used. As part of a nationwide study of financing methods of farmer cooperatives, the Service has studied the financial structure of 105 farm supply regionals. They had total assets of \$867 million of which 64 percent was financed by net worth. Net savings amounted to \$78 million representing a 14.1 percent return on net worth. Guidelines provided in the study will help cooperative management improve financing methods.

Increasing cooperative participation in Rural Areas Development Program. Farmer cooperatives are important self-help devices for developing and improving rural areas. Some examples of Farmer Cooperative Service participation in the Rural Areas Development Program are the following:

- (1) Evaluated 22 technical assistance proposals dealing with production, processing, and marketing of agricultural products; (2) supervised three ARA technical assistance contracts to determine feasibility of establishing livestock feedyards and slaughter plants in North Dakota, Montana, and Oregon; (3) initiated an ARA technical assistance study to determine the potential of establishing alternative timber-based management, marketing, and processing activities to serve woodland owners in Appalachia; (4) developed information on the feasibility of establishing bulk feed transfer stations in rural areas where volume does not warrant establishing new feed manufacturing facilities; (5) assisted in a Departmental study to develop a program to improve the economy of the depressed Maine potato producing area; and (6) assisted in establishing two livestock cooperatives as part of a program to aid livestock producers in the Southeast develop facilities to finish cattle to slaughter grades.



## AREA NO. 1: COOPERATIVE MARKETING

Problem: Farmers are expanding their use of cooperative marketing. There are constant changes in transportation, processing, and distribution technology, and in market organization and practices, and changes on the farm itself. In view of these developments, farmer cooperatives and other marketing firms require research results to perform both efficiently and effectively. Such research can assist farmers to maintain and strengthen their bargaining power, increase efficiency, and meet the quality, quantity, and service needs of today's food and fiber marketplace.

Cooperative marketing is a major way for farmers to get maximum returns from their products in the current and rapidly changing market. Farmers own and control cooperatives specifically to increase their income from crops and livestock. Gains are not automatic, however. Cooperatives must plan, develop, and actually manage the specific marketing program and services that will yield the most for their members. Marketing cooperatives must know what the market demands. They must be able to compute the probable cost of different ways of serving the market. They must understand the possibility of major economies in a well coordinated joint sales program, and understand the methods and potentials of bargaining. Management must achieve minimum costs through improved organization, good use of existing plant and personnel, and the selection and use of new equipment and methods.

### USDA PROGRAM

The Department conducts a continuing long-range program of basic and applied research and technical assistance on problems of marketing farm products cooperatively. Studies are made on the organization, operation, and role of farmer cooperatives in marketing. While most of the research is done directly with cooperatives, the results are generally of benefit to other marketing firms. The work is centered in Washington, D.C. Many of the studies, however, are done in cooperation with various State experiment stations, extension services, and departments of agriculture.

Federal professional man-years devoted to research in this area totaled 23.3. Of this number, 1.0 was devoted to cooperative marketing of citrus, 2.7 to cotton, 4.5 to dairy, 1.2 to deciduous fruit, 2.2 to grain, 3.9 to livestock and wool, 1.3 to oilseeds and peanuts, 1.0 to potatoes, 3.5 to poultry, 0.1 to rice, 0.6 to tobacco, and 1.3 to vegetables.

Research also is conducted under contract with land-grant colleges, universities, cooperatives, and private research organizations. During the period of this report, contract research was performed by universities and colleges in Florida, Iowa, Louisiana, Montana, North Dakota, and West Virginia, and by one private research company.

## STATE EXPERIMENT STATIONS PROGRAM

The State stations maintain a very broad research program in commodity marketing, the findings of which are valuable to cooperatives and to other marketing firms. There are at this time nine projects in eight States that deal specifically with cooperative marketing. Five projects are commodity oriented and deal with grain, tobacco, milk, livestock, and fruits and vegetables. These projects seek to find out how cooperatives are adjusting or might better adjust to changes in market structure and marketing practices. In some instances researchers are studying the success and failure of cooperatives and the organizational structure. One study of the history of major cooperative marketing associations in the State will be published as a book and will undoubtedly receive nationwide attention.

Because of the growing interest in the role of cooperatives in market structure, one State recently initiated a major project in this area. The project leader views cooperative enterprises as a structural dimension of farm markets. The objectives and operating procedures of cooperatives will be studied to see if they have a unique impact upon market conduct and performance. If so, this may have significant implications for Government policies and programs.

The total research effort on cooperative marketing in the eight States is 3.4 professional man-years.

## REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

### A. Coordination of marketing

Farmers and their cooperatives need to adapt their marketing methods to the requirements of large-scale buyers, mass merchandising, and other changed conditions. In many cases the coordination of marketing of a number of cooperatives, marketing the produce of hundreds or thousands of farmers, will satisfy these needs and improve returns to farmers. Such coordination may be accomplished by establishment of joint sales agencies or by other methods. Research to determine the problems and needs, and to develop guides for adopting new practices, included work with several commodities.

1. Dairy. Milk is more mobile than before, and there are opportunities to obtain large cost savings through the use of larger milk plants employing new technology. These changes bring a great need for better coordination among cooperatives in milk marketing. A study was made of alternative methods of coordinating the fluid milk marketing of four cooperatives. The study showed that farmers could reduce the cost of packaging and distributing milk about one dollar per hundredweight by using one large modern plant. Economic feasibility of a proposed milk drying plant was studied. It was found that farmers could receive greater returns by coordinating

their marketing through existing cooperative plants rather than by building and operating a new plant. Analysis of six cooperatives showed that coordination of milk marketing through a single sales agency would tend to stabilize market conditions and greatly increase returns to farmers.

2. Deciduous fruit and tree nuts, vegetables. Work continued on a study to determine problems and possibilities in further coordinating marketing of fruits by selected sales agencies. Guides will be developed for these agencies and other cooperatives interested in a coordinated marketing program. Operations and structure of a joint sales agency of vegetable processors in the North Central States were studied. Recommendations were made for strengthening this organization.

3. Grain. Changed freight rates and transportation facilities call for major changes in grain marketing. Studies were made in the Midwest concerning the feasibility of constructing and operating river or port facilities by grain producers. Analysis is continuing of the feasibility of uniting two regional cooperatives in Iowa in order to serve the producers better and more efficiently. Findings in a study of an Illinois cooperative led to merger with another cooperative. In Tennessee, analysis is underway of the economic feasibility of a new soybean marketing program proposed by a large-scale cooperative. This proposal includes operation of local elevators and possibly a processing plant. Staff members are participating in research of the agricultural experiment stations in the South concerning the specific grain marketing problems of that area.

4. Poultry. A study was completed providing plans for a coordinated marketing effort by cooperatives also engaged in rendering production services to poultrymen. Studies were undertaken to assist cooperatives in considering merger, and developing plans for such merger or consolidation.

#### B. Improving cooperative sales and distribution methods

In many commodity fields, wholesale and retail marketing practices have changed so much that sales and distribution methods need to be restudied from the farm level forward. Research on these problems included work in several commodities.

##### 1. Horticultural crops.

(Citrus) To provide growers and shippers with guidelines that will help them to adapt to changing marketing conditions, analysis is underway to determine the nature of large-scale buyers' requirements for Florida fresh citrus. The nature and extent of specification buying is being studied in detail.

(Deciduous fruit, vegetables) Cooperative bargaining has been increasing among fruit and vegetable growers. Work has been initiated to (1) determine the current status of producer bargaining associations, (2) analyze common characteristics with regard to producer-market contractual and competitive relationships, (3) identify and evaluate factors responsible for success or failure of bargaining cooperatives, and (4) develop a framework and recommendations useful to groups interested in engaging in cooperative bargaining.

(Celery) A survey was completed of celery buying preferences and practices of retail chainstore organizations and produce wholesalers. Research was conducted under contract with a private market research firm.

(Dry edible beans and peas) Analysis continued of ways for selected cooperatives marketing dry edible beans and peas to improve their marketing and distribution effectiveness. This work was conducted under contract by a private research organization.

2. Dairy. Research was completed concerning the marketing of nonfat dry milk to domestic commercial outlets. It was found that cooperative manufacturers were able to meet exacting specifications and provide sufficient quantities for commercial users. A need was shown for more information based on research concerning the effect of different types of nonfat dry milk on various finished products. Communication between users and manufacturers needs to be strengthened to insure that users get the best kind of nonfat dry milk for their use, and that plant processing practices employing nonfat dry milk are making the best use of this ingredient.

Staff members are participating in study of the changed market structure for dairy products in the Midwest, by university researchers in that region.

3. Potatoes. Marketing problems of the Maine potato industry were studied and suggestions made about the feasibility of bargaining activity. Procedures necessary to initiate bargaining were outlined. Findings stressed the importance of obtaining full grower support before bargaining is initiated.

A study was completed of shipping point practices and product preferences of important wholesale buyers of Virginia white potatoes. It was found: (1) The preferences of chainstore, chipper and itinerant buyers vary with respect to potato characteristics, container sizes and types, and shipping point services desired; (2) A high proportion of buyers get most of their potatoes directly from growers or shippers in the production area. Individual Virginia growers find it difficult to satisfactorily meet quantity and quality requirements of large-scale buyers. However, buyers think the Virginia industry is equal to other areas in practices and services provided at shipping point; (3) Virginia growers and shippers

may improve their industry position by practicing more strict grading and sizing of product, and by initiating more orderly marketing. This study was done jointly with the Virginia State Department of Agriculture.

4. Poultry. Examination continued of potential ways to increase producer returns for fowl. Findings indicated that (1) fowl has suffered a drastic loss of value at farm level, (2) the further processing industry absorbs most of the fowl but lacks competition, (3) prices realized by producers have been low in relation to the utilization value of fowl, (4) more competition, new marketing, and new merchandising methods are needed, (5) producer-owned facilities could be established to provide such competition and improved practices.

5. Wool. A study under contract with Iowa State University is evaluating factors influencing wool marketing decisions of Iowa farmers. Wool producers, marketing agencies and wool buyers were surveyed to determine why farmers use various marketing methods. Findings will assist cooperatives in Iowa and other States provide the services best suited to small farm flock owners.

### C. Potentials in cooperative marketing

In several commodity areas an appraisal is needed of the present and potential role of cooperative marketing. Current information on cooperative operations can be related to production and marketing conditions. This research will yield suggestions about cooperative operations and services, and provide current data needed by cooperative leaders and others for planning and implementing cooperative marketing programs.

1. Citrus and subtropical fruit, deciduous fruit and tree nuts, and vegetables. Study continued on the present status and trends in cooperative marketing of these products. Research will include evaluation of the potential of cooperatives for increasing their operating efficiency and market effectiveness through integration, coordination, consolidation, expansion, or other means.

2. Dairy. A study of cooperative marketing activities and facilities was initiated. This research will include analysis of potential benefits to dairy farmers from increased coordination of their current activities.

3. Forestry. Research was initiated to determine the feasibility of alternative kinds of forest-based associations in Maryland, Pennsylvania, and West Virginia. This work is being performed under contract with West Virginia University. Available information on management and marketing conditions was provided to woodland owners and others interested in the potential of timber-based associations.

4. Livestock. Trends in consumption and the market potential for meat in the Northeast were studied on a regional basis. Several concerns were contacted in the region that buy meat for additional processing. Preliminary findings indicate that existing and proposed cooperative slaughter plants in the Corn Belt area could find profitable outlets for their members' livestock in the Northeast.

Studies under contract with Montana, North Dakota, and Oregon relating to cooperative feedlots have been completed. These studies indicate possible benefits to livestock growers and grain producers from feeding locally produced animals and crops over selling both the feeder animals and grain.

5. Poultry. An appraisal was initiated of the functions and potentials of broiler auctions. This research will determine the origin, history, and present economic condition of live broiler auctions. The influence of auctions on broiler pricing will be analyzed, including study of areas where auctions developed and where they did not. Factors leading to broiler auction success or failure will be studied. Findings of this study should permit appraisal of the potential role of broiler auctions, and recommendations for improving broiler auctions.

#### D. Pooling and pricing

Pooling principles and procedures must be periodically examined as to their effect on equity among members and efficiency in marketing. In some commodities, pooling has not come into widespread use, and the use of pooling needs to be studied and its application considered.

1. Citrus and subtropical fruit. Research is underway to determine the impact of the 1962 freeze on various types of pooling arrangements used in the Florida citrus industry. Information will be provided marketing organizations on the advisability and means of adjusting conventional pooling arrangements to emergency situations. This work is being done under contract with the University of Florida.

2. Dairy. New research was initiated on problems involved in cooperative pooling of expenses and returns in marketing members' milk.

3. Poultry. Study continued of pooling practices of cooperatives in marketing eggs. A report is being prepared, including suggestions for the adoption of sound and equitable pooling payment practices.

4. Wool. A study of over 230 cooperative wool pools showed that these pools provide adequate market outlets for many small wool producers. These pools benefit small flock owners through greater bargaining power and higher prices, convenience, quick cash payments to growers, and educational benefits on ways to prepare their wool and sell on a graded basis.

E. Improving operating methods in processing and storage

Studies were underway in several commodity fields to examine new methods, equipment, facilities, and structures for efficient and safe processing and storage of agricultural products by cooperatives.

1. Cotton. Research was completed on how much chemical lint to remove from cottonseed under varying linter prices. Findings give guidelines for mills to use, applying their own costs and revenues of delinting, in determining how much linters to remove. Another study was underway to develop recommended changes in operations and organizational setup of cotton cooperatives in west Texas. Research continued on economic effects of storing seed cotton in baskets at gins.

2. Grain. A study of the economics of grain bank operation has been completed. This was a joint study with the Economic Research Service and was conducted under contract with Purdue University.

Study of drying and storing rough rice on-farm and off-farm showed a wide variation of costs and also resulting quality variation of rice. Little difference in quality effect was shown between the multipass and stationary type units. Commercial dryers tend to perform better on grade, and on-farm dryers on milling yield. This study was made under contract with Louisiana State University.

3. Oilseeds and peanuts. Analysis of operating costs of cooperative soybean processors continued. Data developed in this study assist processors to increase returns to growers through reduced operating costs. Findings also assist in appraising the feasibility of constructing new soybean processing plants.

4. Livestock. Three livestock marketing cooperatives were studied to find ways to increase the income of livestock growers by more efficient operation of existing cooperatives.

5. Poultry. Policies of poultry cooperatives were studied to identify ways such cooperatives might increase their volume by attracting large producers, thus reducing operating costs.

F. Cost and efficiency

Research studies were undertaken to develop more efficient marketing practices and procedures through analysis of costs involved in using various kinds of facilities and methods of operation.

1. Cotton. Analysis was made of ginning costs for central gins with receiving stations. It was found that ginning costs could be reduced about \$5 a bale, and that the value of cotton could be improved through blending, perhaps by about \$5 a bale. Operating costs and revenues of cottonseed oil mills were analyzed. Findings help operators to locate inefficient features of their operations. Analysis of the oil flow pattern in cottonseed and soybean oil mills gave information suggesting more efficient marketing and transportation of oil.

2. Dairy. Case studies were made of the organizational structure, operating methods, and costs of large multiproduct cooperatives. The studies showed both advantages and disadvantages in designing a flexible rather than specialized dairy plant.

3. Grain. Costs of regional grain elevators were analyzed, providing data to assist large-scale elevator operators in identifying opportunities for reduction of costs.

4. Livestock. Analysis was made of the feasibility of livestock producer cooperatives integrating their operations from production through feedyards, marketing, processing, and distribution. Information was provided several groups about one or more phases of handling livestock.

5. Wool. Assistance was provided wool cooperatives in solving their wool handling and marketing problems. Study showed ways for these cooperatives to extend their services and also reduce their operating costs.

G. Improving the organization, financing, and management practices of marketing cooperatives

Studies were made to determine ways to improve the efficiency and assist cooperatives improve their services by analysis of organization, financing, and management practices.

1. Dairy. Financing of selected bargaining cooperatives was studied, showing that as marketing services were expanded, the historic service fees have become inadequate. Changes are required in order to maintain present services and also maintain a sound financial structure. A study of member representation in one cooperative developed proposals for more equitable member representation on the board of directors. It was shown that a sound plan for member representation in policy decisions is necessary to maintain sound and generally acceptable policies, particularly following cooperative growth through consolidation and merger. Study of a large and growing manufacturing cooperative showed the need to revise the supervisory control system as a cooperative grows, in order to keep operations efficient, and get maximum returns for farmers.

2. Deciduous fruit and tree nuts. Proposed cooperative fruit marketing and storage operations in Illinois and New Mexico were studied. Recommendations were made about organizational structure and plans of operation.

3. Grain. A study was initiated of inventory controls and practices of local elevators. Study of the operations and financial status of large-scale grain cooperatives was continued. These organizations must meet financial problems posed by lease or purchase of new transportation equipment to meet a rapidly changing transportation situation.

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## AREA NO. 2: COOPERATIVE PURCHASING

Problem: Modern farm operation requires an average annual expenditure of approximately \$4,000 per farm--an amount equal to about one-half of the farmer's cash farm income. Along with the trend to larger farms is the shift in emphasis from labor to various types of capital inputs. These changes in farm technology lead to increasing agricultural productivity. The 15,000 cooperatives providing production supplies and farm service face changes inherent in this type of changing agriculture.

The larger, but fewer, highly mechanized farm units make streamlining supply systems from point of production to the farm a practical reality. The challenge is to provide both the streamlined and the traditional distribution systems at reasonable costs during the transitional phase. Further, at some point in the future only the streamlined system may be in effect, entailing major organizational changes.

The modern farm is also seeking certain farm services as a means of increasing farm productivity without major capital expenditures. Lime and fertilizer spreading, custom feed mixing, production contracts, credit, irrigation, custom freezing, and insurance are among the many services that are now being provided in some areas. Growing urbanization and the opportunity to serve both farm and nonfarm patrons also suggest changes in organizational structure and changing relative advantages of centralized and federated types of organization.

### USDA PROGRAM

The Department has a continuing program of basic and applied research and technical assistance to assist farmers in improving cooperative purchasing of production supplies and related farm services. Research efforts are directed to improving organizational structures, determining the role of cooperatives in the industry and the development of operational methods applicable to the needs of modern agriculture. Most of the work is conducted directly with cooperatives. While the guidelines and analyses are directly applicable to cooperatives, the results are also generally applicable to other farm supply and service organizations.

The work is centered in Washington, D.C., but some of the studies are done in cooperation with various State experiment stations, extension services, and departments of agriculture. Some research is conducted under contract with land-grant colleges, universities, and private research firms. During the period of this report, contracts were in force with universities in Illinois and Iowa, and one private research company.

Federal professional man-years devoted to research in this area totaled 6.1. Of this number, 4.0 were devoted to farm production supplies, 0.4 to farm services, and 1.7 to frozen food lockers.

#### STATE EXPERIMENT STATIONS PROGRAM

Many State stations maintain close working relationships with farm supply cooperatives even if no research project is in evidence. Some States engage in intensive surveys from time to time to determine the kind and volume of supply business done by the cooperatives of their State and the kinds of problems and opportunities that confront them. Such surveys also cover the organizational and financial structure of the cooperatives. The State stations' research helps the cooperatives improve their business management and also indicates the products and services that cooperatives might most successfully provide.

Presently five State stations have projects on supply cooperatives. One project is of an inventory nature with some attention to needed adjustment in products and services provided. One project seeks to evaluate the performance of cooperatives of the State and to develop guides to success. Another project is concerned with capital formation and growth of cooperatives. Small farmer purchasing cooperatives in one State apparently need to get together and form a strong federated purchasing system and this possibility is being researched by the State station. As cooperatives become larger and get more involved in the farm supply business, they begin asking questions about volume-cost relationships not only from the standpoint of plant operations but also in pricing operations. This is being investigated by a midwestern State. The total research effort on cooperative purchasing is approximately 0.7 man-year.

#### REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

##### A. Farm production supplies

1. Coordination of farm supply services. Four studies were made, including examination of feasibility and possible ways of combining a total of 19 cooperatives handling farm supplies. Total estimated savings realized by farmers were estimated in three of the studies at \$440,000 in the fifth year after these proposed mergers. The fourth study is still underway. These studies showed that long-term benefits are likely to be much greater than in the first or second year. The merged associations would gradually gain more depth in management, better organizational structures, better use of facilities, and stronger financial positions. Research techniques were developed that will help other associations and agencies wishing to examine the feasibility of mergers.
  
2. Improving distribution methods for farm production supplies. A study of 13 local feed buying groups in Illinois is underway, under contract with the University of Illinois. The main reason given for farmers participating in these groups was the saving realized on purchases.

Analysis of bulk feed relay depots was continued. Preliminary findings indicate need for better long-range estimating of feed needs, and analysis of the economic soundness of alternatives. A 5-minute informational movie was prepared for use on TV farm shows, showing the role of bulk feed depots.

Study of bulk receiving, transportation, and distribution of seed was continued. More farmers use bulk harvesting equipment, so they deliver more seed to cooperatives in bulk. Analysis of cost of handling bulk seed has proven difficult. No freight advantage has been found. Many hazards and some State laws would make difficult the outbound shipment of seed in bulk.

3. Potentials of cooperatives in farm production supplies. Study of cooperative bulk fertilizer blending service centers was completed. Service was an essential part of bulk blending, especially complete soil fertility analysis. Minimum volume was shown to be about 2,500 tons a year. New operations will generally face more competition, since many firms are adding bulk blending service.

Study of the potential of cooperatives in the fertilizer industry was started. Objectives are to provide farmers and their cooperatives with information on use trends and probable future manufacturing and distribution practices. Such information will assist cooperatives to become or remain pace setters in supplying farmers' needs.

4. Pricing practices of farm supply cooperatives. A study of pricing practices is underway, with particular emphasis on quantity discounts used for feed and fertilizer. Information also will be obtained on services provided and patronage refund policy in relation to pricing. Methods employed among large users will be emphasized.

5. Procurement and manufacture of farm production supplies by cooperatives. A study of selected liquid pesticide formulation and distribution operations was initiated. Major emphasis is being placed on facility requirements, operational practices, and services required. Preliminary findings indicate that formulation is a relatively low cost operation, but that quality materials and a strong service program for users are required.

Study of the procurement of containers for marketing fruits and vegetables was continued. Findings indicated savings from 4.4 to 22 percent on the cost of various kinds of containers bought through farm supply cooperatives compared with other sources. Cooperatives buying from other sources gave reasons of convenience, availability, and rapid service.

6. Improving the organization, financing, and management practices of farm supply cooperatives. Study of a regional cooperative resulted in a wide range of recommendations for improvement in management, organization, and operations. These recommendations included stricter credit control,

improved management of inventory, clarification of duties of the board of directors and operating management, better personnel training, and lower cost purchase or manufacture of feed. A second study involved adjustments to suburbanization in the operating area of a cooperative. The probable costs and results of alternative lines of action were analyzed.

A business and organizational study was started of a successfully integrated regional marketing and supply cooperative. Information is being compiled on its adjustments to changing conditions, and its financial and operating policies. Findings in these studies both benefit their own members and assist the Department in working with other cooperatives.

Information was assembled for a report on the structure, operations, and financial status of 24 major regional cooperatives handling farm production supplies in 1962 and 1963.

B. Farm services

1. Potentials of cooperatives in providing farm services. Data were obtained on rural credit union enterprises in the United States, showing 681 rural credit unions serving about 270,000 members in 46 States. Accumulated savings were over \$100 million. The study indicated active interest in credit unions on the part of farmer cooperatives and farm organizations. Planning was underway for research concerning handicraft industries in selected low-income areas.
2. Improving the organization, financing, and management practices of farm services cooperatives. Farmer Cooperative Service assisted in conducting a management training school for staff of farmers' mutual fire insurance companies. Current information was compiled on arrangements between farmer cooperatives and production credit associations in extending credit on purchase of farm supplies.

C. Frozen food lockers

1. Improving sales and distribution methods for frozen food provisioners. An appraisal was continued of the effect of credit on sales in locker and freezer provisioning organizations. Credit is an important merchandising tool in this industry.
2. Potentials of cooperatives in frozen food provisioning. A study is underway of trends in size, location, facilities, operations, and custom services of frozen food locker and freezer provisioning firms. Findings will assist these firms in adjusting to current and prospective market conditions.
3. Improving operating methods in processing of food for lockers and freezers. A study is underway of the methods of locker and related processing cooperatives in processing and merchandising locally produced

food products. Findings will assist cooperatives to improve their efficiency and to adopt practices that will contribute to their success in the light of rapid economic changes in rural areas. Studies of two cooperatives showed they were using facilities and labor at less than half of potential capacity due primarily to seasonal variations in processing volume. Work is underway to analyze alternative ways for expanding services and activities to reduce seasonal variations of volume and thereby increase operating efficiency.

4. Improving the organization, financing, and management practices of frozen food locker cooperatives and others. Work is underway to develop methods for frozen food locker and related small processing firms to estimate market potentials in their area. This work will assist these firms in planning changes in facilities and other operating changes. This study is being conducted under contract by Iowa State University.

PUBLICATIONS REPORTING RESULTS OF  
USDA AND COOPERATIVE RESEARCH

Eichers, T. R. 1964. Cooperative Bulk Fertilizer Blending in the Upper Midwest. FCS General Report 122.

Hyre, F. M. 1964. Service Co-ops Spark Savings. News for Farmer Cooperatives (Jan.).

Mather, J. W. 1964. Supply Cooperatives Strive for Low Farm Costs. News for Farmer Cooperatives (Jan.)

Mather, J. W. 1964. Merger Studies of Cooperatives with Key Agreement Features. The Cooperative Accountant (Spring).

Miner, B. D. 1964. Have You Learned Your ADP's Yet? News for Farmer Cooperatives (Aug.).

Wilkins, P. C. 1964. Frozen Foods Raise Returns in Rural Areas. News for Farmer Cooperatives (Jan.).

### AREA NO. 3: COOPERATIVE ORGANIZATION, MANAGEMENT, AND TRANSPORTATION

Problem: Cooperatives are becoming larger, more complex and diversified to meet the changing needs of farmer members. This has been accompanied by a need to improve organization structures, management techniques, and member relations to meet new requirements of cooperative operations.

Research is needed to help cooperatives adapt to change more effectively. Farmers and their cooperatives require more information to assist them in assessing effects of changing transportation services and facilities on cooperative operations, defining management and director functions and responsibilities, developing guidelines for equitable treatment between large and small volume members, planning for consolidation, merger or acquisition, and measuring implications of cooperative trends and developments.

In addition, studies are needed to determine the economic feasibility and to propose methods of organization and operation of new types of cooperatives, especially in low income rural areas. This work will implement provisions of the Economic Opportunity Act and the Rural Areas Development Program.

#### USDA PROGRAM

The Department has a continuing program of basic and applied research and technical assistance to help farmers strengthen the organization structures of their cooperatives, improve their management, build effective membership relations, and develop and maintain efficient cooperative transportation services. Studies are made of financing methods, managerial and director roles and performance, cooperative trends, membership attitudes and communication, and transportation methods and costs. The program includes increased emphasis on study of feasibility of proposed new enterprises to assist farmers in low income rural areas, as part of the Rural Areas Development Program.

The work is centered in Washington, D. C. Many of the studies, however, are conducted in cooperation with State experiment stations and extension services, and departments of agriculture.

Federal professional man-years devoted to research in this area totaled 8.3. Of this amount, 4.7 were devoted to work on organization and management of cooperatives and 3.6 to transportation.

Research also is conducted under contract with land-grant colleges, universities, cooperatives, and private research organizations. During this reporting period, contracts were in effect with Iowa State University and one private research company.

#### STATE EXPERIMENT STATION PROGRAM

The State agricultural colleges are giving increased research attention to the organization and management of agricultural business firms that market and process agricultural products and also to those that sell farm equipment, supplies, and services. Six agricultural experiment stations are researching the financing of agricultural cooperatives. They are seeking to expand knowledge of the various methods of securing equity capital being used by cooperatives and to learn more precisely the problems they face in securing new capital for expansion. Changes in the Federal tax law, particularly those aspects affecting the tax status of reserves, are receiving attention. Problems of equitable treatment of members who retire and have large investments in cooperatives will be studied. New methods of financing and alternative sources of capital will come to light from these studies.

Five experiment stations have general projects on the organization and operation of the cooperatives of their States. These projects involve surveys of the marketing and purchasing activities of the cooperatives, legislative acts, and operating practices of the cooperatives. Some of these projects seek to evaluate alternative means of improving management selection, management teaching, and management evaluation. One of these projects will be concerned with credit policies and operations.

Four States have projects covering a wide range of subjects including the role of cooperatives in vertical integration, the impact of cooperatives upon the agriculture of the State, effective control of cooperative organization by members, and the social aspects of cooperatives. In the last mentioned study an effort will be made to define the effect of cooperative associations on the people and the communities they serve.

It should be pointed out that as the agricultural colleges expand their curriculum in agricultural business, research in the marketing and purchasing areas tends to expand to include proprietary firms as well.

A total of 5.1 professional man-years are being devoted to research in this area.

#### REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

##### A. Organization and management

1. Financing methods. Work continued on a nationwide survey of the capital structure of all farmer marketing, farm supply, and related service cooperatives listed with Farmer Cooperative Service. A report has been completed covering 105 farm supply regionals. This group of cooperatives had total assets of \$867 million, of which 64 percent was financed by net worth. Total business volume in 1962 amounted to \$1.7 billion from transactions with 963,000 patrons. Net savings amounted to \$77.9 million, which represented a 14.1 percent return on net worth.

A report was published summarizing the more important investment credit provisions of the Revenue Act of 1962, especially as the application of these provisions was affected by differences in taxable income of exempt and nonexempt agricultural cooperatives. The report illustrated how a non-exempt cooperative could use investment credit to greater advantage than an exempt cooperative.

A study of the operations and financial condition of a regional grain marketing association was completed. The study made recommendations for revitalizing the association's membership relations program, streamlining operations, improving financial planning procedures, and improving personnel relationships.

A case study of the stock repurchase program of a large marketing cooperative was completed. The study made recommendations for changes in the association's bylaws and provided a technique for evaluating the financial impact of the stock repurchase program, taking into account other projected programs of the association.

A study now underway of a regional livestock marketing cooperative will analyze the association's long-range financial management problems.

2. Management and director functions. A study was made of the operating structure and supervisory responsibilities of a dairy cooperative. Findings of this study along with similar studies of the organization plan and internal control procedures of two other dairy cooperatives were brought together in published form. The findings stressed the need for management to analyze the organization structure as it affects operating efficiency, provides for management continuity, and preserves the cooperative character of the organization.

3. Cooperative trends. Information supplied by marketing, farm supply, and related service cooperatives on their business volumes and memberships in the 1961-62 period indicated that total business volume continued its upward trend, while the number of cooperatives and memberships continued to decrease slightly.

Total gross volume of business, including interassociation business, amounted to \$17.2 billion. Total net business, after adjusting the gross figure for business done between cooperatives, amounted to \$13 billion. This represented an increase of 5 percent over the \$12.4 billion in 1960-61 and 60 percent over the \$8.1 billion total net business reported in 1950-51.

The total number of these cooperatives was 9,039. This was a decrease of 124 associations from the previous year. For several years, reorganizations involving mergers, consolidations, and acquisitions have had an important influence on the downward trend in total number of cooperatives. These reorganizations have been made largely for the purpose of improving operations and expanding services to meet the changing needs of farmer patrons.

A nationwide study has been undertaken to provide information on the affiliation of local cooperatives with regional associations. The last such study was made in 1950. Since then many developments have resulted in new affiliations as well as extensive changes in earlier affiliations. Programs now concentrating on rural area development create a special need for current and accurate information on the extent of affiliation of local cooperatives with regionals in properly directing research and service assistance to cooperatives in specific areas.

B. Membership relations

1. Appraising member and nonmember attitudes and participation. Farmer cooperatives depend on loyal member support, patronage and understanding to keep them economically strong and healthy. In addition, the economic and legal climate in which they operate depends in part on how well cooperatives tell their story to the general public. Research was conducted seeking to identify factors and techniques which motivate member loyalty and bring about public understanding of the nature of cooperatives.

Two studies in the above general area were continued. Preliminary findings were available in a study of urban attitudes toward cooperatives. Most urban leaders interviewed in the study believe that: (1) farmers have a right to organize cooperatives, but that cooperatives have a negative effect on other business firms; (2) newspapers and personal contacts with farmers are their most important sources of information about cooperatives; and (3) contacts with business and professional associates have the most influence in helping them form their basic attitudes toward cooperatives; publications by cooperatives, State cooperative councils, universities, and Government agencies have much less influence.

2. Improving communication with members. Research in cooperative communication seeks ways of keeping communication channels open and effective. One is a survey of the channels used by all cooperatives in Kansas to keep their members, and the general public, informed of cooperative activities.

The other study seeks to locate suitable teaching material for use by those working to develop cooperative endeavor in underdeveloped areas, both in the United States and abroad. There is need for teaching material couched in nontechnical language.

C. Transportation

1. Loss and damage to agricultural products in transit. Farmers and their marketing agencies incur millions of dollars of loss each year due to damage and loss associated with the movement of agricultural products from producing areas through the marketing process to final destinations.

A study of grain loss and damage in transit at 101 country and 6 terminal elevators was completed. The analysis showed that such losses averaged over \$14 per rail car for the 13,611 cars shipped during one year by the 107 elevators in the study.

Specific relationships to grain loss and damage were found to exist by type of grain door used, railroad serving the elevator, length of haul, type of grain shipped, care exercised in cooperating, and condition of cars. The report of findings will show grain shippers how to curtail losses by eliminating loss associated conditions in transportation equipment and practices.

2. Motortruck operations and costs. Farmer cooperatives in the United States operate an estimated 33,000 motortrucks. Operating cost information is needed to provide benchmarks for the guidance of cooperative managements in helping increase efficiency of operations and thereby increase returns to farmers.

Principal findings of a study completed on operating costs of 656 trucks operated by 20 farmer cooperatives in 11 States include: (1) Total operating costs amounted to \$13 3/4 million in 1962, or 36 cents a mile operated, (2) each truck averaged 58,100 miles a year, (3) backhauls were available for only 22 percent of the truck trips, (4) 93 percent of these backhauls were the cooperatives' own goods, and (5) "adequate service not available for needs" and "more economical" were the principal reasons expressed by cooperative managers for operating their own trucks.

A study is underway of operating costs and characteristics of bulk feed trucks operated by cooperatives. Detailed information on type, size, age, and costs of bulk feed trucks as well as operating costs, sizes of loads, and general operating conditions have been obtained on more than 100 trucks.

3. Appraisal of alternative methods of product handling and transportation. Increases in total distribution costs resulting from changing transportation methods and facilities require emphasis on physical distribution management or business logistics to develop least-cost distribution systems in farmer cooperatives. A plan of work has been completed to conduct physical distribution management studies in farmer cooperatives to aid in developing least-cost handling and distribution systems for moving farm products and supplies through the various stages of cooperative marketing more economically.

Work continued on a study of transportation factors in marketing soybeans, cottonseed, and their products by farmer cooperatives. This study is being conducted under contract by Iowa State University. Preliminary analysis of data indicates about 65 percent of the cottonseed shipped into eight cottonseed oil mills originated within 50 miles of the mills. Transportation costs on outbound shipments of cottonseed crude oil from the mills averaged almost \$12 a ton.

4. Traffic management in farmer cooperatives. The transportation bill on products marketed and farm supplies purchased by farmer cooperatives is estimated to be over \$1 billion a year. An initial study showed that less than 200 of the over 9,000 farmer cooperatives in the United States have full-time traffic management. Yet, over 2 million farmer members of cooperatives depend on these associations to provide them with adequate transportation at low cost to maximize returns on farm products marketed.

Further research was initiated to determine the place, utilization, and economic contribution of traffic management in farmer cooperatives.

PUBLICATIONS REPORTING RESULTS OF  
USDA AND COOPERATIVE RESEARCH

Organization and Management

Gessner, A. L. 1964. Today's Co-ops -- Fewer and Better. News for Farmer Cooperatives (Jan.).

Gessner, A. L. 1964. Co-op Business Volume Continues to Climb. News for Farmer Cooperatives. (Reprint 271). (Feb.).

Gessner, A. L. 1964. Size of Cooperative Business Continues to Increase. News for Farmer Cooperatives. (Reprint 278). (April).

Gessner, A. L. 1964. Statistics of Farmer Cooperatives, 1961-62. FCS General Report 119.

Manuel, M. L. 1964. Co-op Management--Its Meaning. News for Farmer Cooperatives (Feb.).

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Volkin, D. 1964. Economic and Co-op Advances--Are They Compatible? News for Farmer Cooperatives (Jan.).

Volkin, D. 1964. Management Program to Reach All PCA Personnel. News for Farmer Cooperatives (June-July).

Volkin, D. 1964. FCS Studies Internal Organization Structure. News for Farmer Cooperatives (Sept.).

Membership relations

LeBeau, O. R., and Hallberg, O. K. 1964. The Director's Role in Member Relations. FCS Educational Aid 6.

LeBeau, O.R. 1964. Director's Roles Rounded Out at Member Relations Meetings. News for Farmer Cooperatives (Aug.).

Rust, I. W. 1964. Strong Member Support Builds Invisible Capital. News for Farmer Cooperatives (Jan.).

Proceedings of the 1963 Midwest Member Relations Conference, 1963.

Proceedings of the 1962 Midwest Member Relations Conference, 1963.

Transportation

Byrne, R. J. 1964. Service at Savings - Aim of Co-op Transportation. News for Farmer Cooperatives (Jan.).

Byrne, R. J. 1964. Dynamic Dimensions in Transportation. American Cooperation 1964. Proceedings of the American Institute of Cooperation.

Byrne, R. J. 1964. Extent of Traffic Management in Farmer Cooperatives. Information 44.

Camp, T. H. 1964. Motortruck Operating Costs of Farmer Cooperatives. General Report 121.

Rickenbacker, J. E. 1964. Safety-Checking Handling Practices to Reduce Livestock Losses. Information 45.

Rickenbacker, J. E. 1964. Know Your Transit Losses. The Grain and Feed Journal (July).

Rickenbacker, J. E. 1964. Old Man River Helps Move Co-op Grain. News for Farmer Cooperatives (June-July).

Line Project Check List -- Reporting Year October 1, 1963 to September 30, 1964

Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj.	Incl. in
			Summary of Progress	Area & Sub-heading
a-1-1	Research, service and educational assistance for cotton and oilseeds cooperatives			
a-1-1-1 (Rev.#2)	Advisory and educational assistance on current organizational and operational problems of cotton marketing cooperatives	N.Mex., Calif., Tex., Ariz., Ark., Okla., Miss., Tenn., Ill., Wash., D.C. Tex., Wash., D.C.	Yes	1-F
a-1-1-4*	Organizational structure and operations of cotton cooperatives in Lubbock area of Texas		Yes	1-E
a-1-2	Research, service and educational assistance for dairy cooperatives			
a-1-2-10 (Rev.)	Advisory and educational assistance to dairy cooperatives on their problems relating to organization, operations, procedures and policies	Tex., Va., Tenn., Minn., S.Dak., Miss., N.Y., Wyo., Idaho	Yes	1-A-F-G
a-1-3	Research, service and educational assistance for frozen food locker cooperatives			
a-1-3-4 (Rev.#2)	Frozen food locker and freezer provisioning plants in a national emergency	Wash., D.C.	No	2-C
a-1-3-5 (Rev.#2)**	Annual report of frozen food locker and related processing plants in the United States	Wash., D.C.	No	2-C
a-1-3-6 (Rev.#2)	Advisory and educational assistance to frozen food locker and related processing and merchandising cooperatives	Ill., Va.	Yes	2-C
a-1-3-9	The role and methods of locker and related processing cooperatives in processing and merchandising locally produced food products	Ill., N.C., Va.	Yes	2-C
a-1-4	Research, service and educational assistance for fruit and vegetable cooperatives			
a-1-4-15 (Rev.)	Advisory and educational assistance to fruit, vegetable, and nut cooperatives on organizational and operational problems	Ill., N.Mex., Maine, Wash., D.C.	Yes	1-A-B-G
a-1-4-17	Scope and potentials in marketing fruits, vegetables, and nuts by cooperatives	Wash., D.C.	Yes	1-C
a-1-5	Research, service and educational assistance for grain cooperatives			
a-1-5-5 (Rev.#2)	Comparative operating efficiency of regional grain cooperatives	United States	Yes	1-F
a-1-5-8 (Rev.)	Accounting exercises for cooperative grain elevator personnel	Midwestern States	Yes	1-G
a-1-5-10	Comparative operating efficiency of cooperative soybean oil mills	Midwestern and Southern States	Yes	1-E
a-1-6	Research, service and educational assistance for livestock and wool cooperatives			
a-1-6-12 (Rev.)	Operations and organization of the National Wool Marketing Corporation and affiliated State and regional wool marketing cooperatives	United States	Yes	1-F
a-1-6-16**	Organization and operations of local wool pools	United States	Yes	1-D
a-1-6-17	Advisory and educational assistance to livestock and wool cooperatives on their problems relating to organization, operations, procedures, and policies	United States	Yes	1-E

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Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj.	Incl. in
			Summary of Progress	Area & Sub-heading
a-1-7	Research, service and educational assistance for poultry cooperatives			
a-1-7-12 (Rev.)	Advisory and educational assistance to poultry cooperatives on their problems relating to organization, operations, procedures and policies	Iowa, Minn., N.J., Mass., S.Dak.	Yes	1-A
a-1-7-16*	Organizational structure, operations and accomplishments of Western Farmers Association	Wash., D.C.	No	1-G
a-1-8	Research, service and educational assistance for cooperatives handling special crops			
a-1-8-5 (Rev.)	Advisory and educational assistance on organizational and operational problems of special crops cooperatives	W.Va., Va., Wash.,D.C.	No	1-A-B-G
a-1-8-7**	The role and methods of forestry cooperatives in improving the management and marketing of forest products from small woodlots	Wash.,D.C.	No	1-B-C
a-1-9	Research, service and educational assistance for farm supplies cooperatives			
a-1-9-9 (Rev.)	Annual information on organizational features, operations, and services of major regional farm supply cooperatives	Wash.,D.C.	Yes	2-A
a-1-9-25 (Rev.)	Advisory and educational service on current organizational and operational problems of farm supply cooperatives	Utah, Wash., Wis., Kans., N.J., Va., Iowa	Yes	2-A
a-1-9-27 (Rev.)	Analysis of effective distribution system and fieldmen services of regional cooperatives handling farm supplies	-	No	2-A
a-1-9-30	Analysis of lawn and garden services provided by farm supply cooperatives	-	No	2-A
a-1-9-31**	Analysis of farm supply operations of cooperative gins and elevators	-	No	2-A
a-1-9-32*	Evaluating fertilizer bulk blending and spreading operations of farmer cooperatives	Minn., Wis., Wash.,D.C.	Yes	2-A
a-1-10	Research, service and educational assistance for farm services cooperatives			
a-1-10-4 (Rev.)	Advisory and educational assistance on current organizational and operational problems of farm business service cooperatives	Ill., Wash.,D.C.	Yes	2-B
a-1-10-7**	Study of rural health cooperatives	Wash., D.C.	No	2-B
a-1-11	History and statistics of cooperation			
a-1-11-2 (Rev.)	Maintenance of file on cooperative source material	Wash.,D.C.	No	3-A
a-1-11-4 (Rev.)	Service and educational assistance in developing and disseminating statistical information on agricultural cooperation	Wash.,D.C.	No	3-A
a-1-11-9	Trends in fertilizer manufacturing and distribution by farmer cooperatives	Wash., D.C.	No	3-A
a-1-11-10*	Survey of extent of local affiliation with regional cooperatives	Wash.,D.C.	Yes	3-A
a-1-11-11***	Annual statistical survey of farmer marketing, farm supply, and related service cooperatives	Wash.,D.C.	Yes	3-A

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Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj. Incl. in	
			Summary of Progress	Area & Sub-heading
a-1-12	Research, service and educational assistance on business administration problems of cooperatives			
a-1-12-14 (Rev.)	Advisory and educational assistance on current organizational and operational problems of cooperatives	Ill., Wis., Wash., D.C.	Yes	3-A
a-1-12-17	Analysis of financial structure of farmer cooperatives	United States	Yes	3-A
a-1-12-19	Developing educational and interpretive material to assist farmer cooperatives to comply with Federal income tax laws	Wash., D.C.	Yes	3-A
a-1-13	Research, service and educational assistance on membership problems of cooperatives			
a-1-13-4 (Rev. #2)	Preparation of educational material on agricultural cooperation for youth groups	Wash., D.C. & nationwide	No	3-B
a-1-13-5 (Rev. #2)	Leader training in cooperative membership programs	Colo., Va., Mich., Ohio, Okla., Fla., Ariz., Idaho, Wash., Mont., Calif., Kans., Mo. Kans.	No	3-B
a-1-13-12 (Rev.)	Providing professional advice and assistance on organization and conduct of research in cooperative membership relations	Kans.	No	3-B
a-1-13-13 (Rev. #2)	Planning training programs in agricultural cooperation for foreign nationals	Worldwide	Yes	3-B
a-1-13-14 (Rev.)	Helping farmer cooperatives to strengthen their membership relations programs and activities	Ga., Mo.	No	3-B
a-1-13-17**	Extending the use of member contracts to strengthen farmer cooperatives in economic integration	Wash., D.C.	No	3-B
a-1-13-18	Strengthening member and public relations programs of farmer cooperatives in Kansas	Kans.	Yes	3-B
a-1-14	Research, service and educational assistance on transportation problems of cooperatives			
a-1-14-7 (Rev.)	Analysis of transportation costs and related factors in the development of marketing and purchasing programs of farmers' cooperatives	Wash., D.C.	Yes	3-C
1101	Costs and efficiency of farmers' business firms in marketing farm products			
1101-20**	Appraisal of feed financing practices by studying operations of farmer cooperatives	Va., Pa., N.C., Wash., Calif., Minn., Miss., Mass.	No	2-A
1101-21 (Rev.)	Improving methods of cooperative marketing agencies and growers in procuring containers and packaging supplies for fresh fruits and vegetables	Fla., Calif., Wash., Wash., D.C.	Yes	2-A
1101-22(C)	A study on the economics of drying and storing rough rice	La., Tex., Wash., D.C.	Yes	1-E
1101-24	Evaluating alternative methods and costs of distributing feed in bulk	Ohio, Ill., Wash., Oreg., Calif.	Yes	2-A
1101-25(C)**	Physical distribution of dry edible beans and peas by cooperatives	Mich., Wash., D.C.	Yes	1-B
1101-26	Costs and economic effects of storing seed cotton by improved methods, with emphasis on cooperative gins	Ariz., Ark., Calif., Mo., N.Mex., Tex., Wash., D.C.	Yes	1-E

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Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj. Incl. in	
			Summary of Progress	Area & Sub-heading
1101-27	Labor utilization at cottonseed oil mills	Cotton Producing States, Wash., D.C., Ill.	Yes	1-F
1101-28(C)	Appraisal of the operations of local cooperative buying groups of farmers in purchasing feed ingredients and formula mixed feeds		Yes	2-A
3101	Developing more efficient use of transportation services and facilities by farmers' marketing agencies			
3101-9 (Rev.)	Analysis of practices of cooperatives in marketing and purchasing seeds and recommendations for improvements	Calif., Minn., Ind., La., Miss., Tenn., N.C., Ga., Va.	Yes	2-A
3101-10 (Rev.#2)	Relation of transportation and handling practices and conditions in moving livestock from farms to initial destinations and processing plants to loss and damage	Colo., Nebr., Iowa, Minn., Mont., N.Dak.	Yes	3-C
3101-11**	Evaluating transportation costs and charges in handling, storing and marketing wool by cooperatives and others in the United States	Wash., D.C.	No	1-B
3101-12**	Farmer Cooperative Service cooperation in SM-11, "Transportation of Grain and Grain Products in the South"	Southeastern States	Yes	1-A
3101-13	Determination of costs, characteristics and efficiency of transportation of agricultural commodities by farmer cooperatives	Va., N.Y., N.J., N.C., Ill., Calif., Oreg.	Yes	3-C
3101-14	Relation of specific handling practices and conditions to loss and damage to grain in transit to and from country and terminal elevators	Nebr., Iowa, Minn., N.Dak., S.Dak.	Yes	3-C
3101-15	Evaluation of traffic management in farmer cooperatives	Wash., D.C.	Yes	3-C
3101-16(C)*	Evaluating transportation factors in marketing soybeans, cottonseed, and their products by farmer cooperatives	Ark., Iowa, Minn., Mo., Tex., Okla., Miss.	Yes	3-C
3101-17*	Farmer Cooperative Service cooperation in SM-29, "Optimal Adjustments of Southern Grain Marketing Facilities to Present and Future Conditions"	Southeastern States	Yes	1-B
3102	Pricing plans and methods of farmers' marketing agencies			
3102-9**	Impact of cooperative bargaining on the market structure and behavior of the processed fruit and vegetable industry	Wash., D.C.	Yes	1-B
3102-10**	An appraisal of pooling practices used by dairy cooperatives	Wash., D.C.	No	1-D
3102-11**	Price differentials obtained for hogs sold by cooperatives on the basis of USDA grades	Wash., D.C.	No	1-D
3102-12(C)**	Improving the competitive position of Florida celery growers in the wholesale market	Wash., D.C.	Yes	1-B
3102-13(C)	Evaluating adjustments in grower payment methods of Florida citrus marketing organizations as a result of the 1962 freeze	Fla.	Yes	1-D
3102-14	Study of pooling and producer payment practices of egg marketing cooperatives and others	Wash., D.C., Ohio, Mich., Wis., Iowa, Wash., Oreg., Calif., Fla., Miss., Ga., N.C., Va.	Yes	1-D-E

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Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj. Incl. in	
			Summary of Progress	Area & Sub-heading
3102-15*	An appraisal of functions and potentialities of broiler auctions	Wash., D.C., Del., Ga., Md., Pa., Va., W.Va.	Yes	1-C
3102-16*	Evaluation of principles and methods used by dairy cooperatives in pooling marketing costs and sales returns	Wash., D.C.	Yes	1-B
3103	Improving processing and storage facilities and techniques of farmers' marketing agencies			
3103-18(C)**	Recovery costs and sales values of chemical grade linters at cottonseed oil mills	Tex., Miss., Ark., Okla., Wash., D.C.	Yes	1-E
3103-19(C)**	Practices, costs and benefits of grain bank operations at cooperative and other feed mills and elevators	Kans.	Yes	1-E
3103-20	Developing methods and data frozen food locker and related small processing firms need for improving facilities planning and product handling	Iowa	Yes	2-C
3103-21*	Study of facilities and operations of locker and freezer provisioning firms in the United States	Wash., D.C.	Yes	2-C
3103-22*	Inventory control practices and policies at local grain cooperatives	Major grain producing areas of U.S.	Yes	1-G
3104	Improving distribution methods and facilities of farmers' marketing firms			
3104-14	Alternatives for cooperatives and livestock producers in integrating production and marketing of livestock and meat	United States	Yes	1-F
3104-15	Appraisal of opportunities and development of methods for improving fowl marketing of cooperatives and other handlers	Wash., D.C.	Yes	1-B
3104-16**	Developing more effective marketing of fluid milk through coordinated activity of bargaining cooperatives in the Midsouth region	Wash., D.C.	No	1-A
3104-18	The influence of changing procurement practices on the marketing of Florida fresh citrus fruits	Wash., D.C.	Yes	1-B
3104-19**	Developing more effective marketing of non-fat dry milk through coordinated merchandising by manufacturing and marketing cooperatives	Wash., D.C.	Yes	1-B
3104-20	An appraisal of the influence of credit upon sales volume in locker and freezer provisioning organizations	Wash., D.C.	Yes	2-C
3104-21**	Improved marketing for Virginia white potatoes	Wash., D.C.	Yes	1-B
3104-22	Farmer Cooperative Service cooperation in NEM 28 (Analysis of trends pointing to future consumption and market potential for meats in the Northeast)	Northeastern States	Yes	1-C
3104-24(C)	Factors influencing wool marketing decisions of Iowa farmers	Iowa	Yes	1-B
3104-25(C)**	Effect of grower contracts and patronage policies on sales and operating methods of marketing cooperatives		No	1-B
3104-26	Organizational structure, operations and potentials of coordinated fruit and vegetable marketing programs	N.Y., Calif., Wash., Oreg., Wis., Wash., D.C.	Yes	1-A

Line Project Check List -- Reporting Year October 1, 1963 to September 30, 1964

Work & Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Proj. Incl. in	
			Summary of Progress	Area & Sub-heading
3104-27*	FCS Cooperation in NCM-26, "Changing market structure and organization of Midwest dairy industry"	North Central States	Yes	1-B
3104-28*	An appraisal of coordinated marketing activities used by dairy cooperatives	Wash., D.C.	Yes	1-C
0-0-1(DC) (C)	Economic feasibility for cooperative livestock feedyards and slaughter facilities	Mont., N.Dak., Oreg.	Yes	1-F
0-0-2(DC) (C)*	Economic feasibility for cooperative forest based management, marketing, and processing enterprises	W.Va.	Yes	1-C

\*Initiated during reporting year.

\*\*Discontinued during reporting year.

\*\*\*Supersedes FCS a-1-11-1(Rev.#2).